

LEGISLATIVE RESEARCH COMMISSION

PEAT MINING AND LARGE-SCALE LAND CLEARING



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JUN 11 1985
LEGISLATIVE RESEARCH COMMISSION

**REPORT TO THE
1985 GENERAL ASSEMBLY
OF NORTH CAROLINA**

LEGISLATIVE RESEARCH COMMISSION

PEAT MINING AND LARGE-SCALE LAND CLEARING



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JUN 11 1985

THE
CLERK

REPORT TO THE
1985 GENERAL ASSEMBLY
OF NORTH CAROLINA

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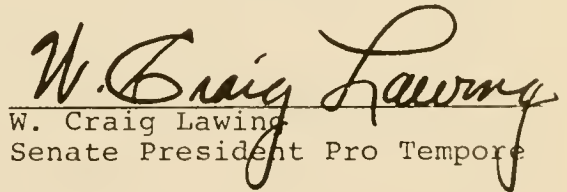
December 13, 1984

TO THE MEMBERS OF THE 1985 GENERAL ASSEMBLY:

This is the Legislative Research Commission's report to the 1985 General Assembly on Peat Mining and Large-Scale Land Clearing. This report is made pursuant to Chapter 905 of the 1983 Session Laws, was prepared by the Legislative Research Commission's Study Committee on Peat Mining and Large-Scale Land Clearing, and is transmitted by the Legislative Research Commission for your consideration.

Respectfully submitted,


Liston B. Ramsay
Speaker of the House


W. Craig Lawing
Senate President Pro Tempore

Cochairmen
Legislative Research Commission

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PREFACE

The North Carolina Legislative Research Commission is an interim study organization of the General Assembly. The Commission is established and governed by North Carolina General Statutes §§120-30.10 through 120-30.18. The Commission is cochaired by the President Pro Tempore of the Senate and the Speaker of the House of Representatives, and the Cochairmen appoint five members from their respective houses. Among the Commission's duties is that of making or causing to be made, upon the direction of the General Assembly, "such studies of and investigations into governmental agencies and institutions and matters of public policy as will aid the General Assembly in performing its duties in the most efficient and effective manner" (G.S. 120-30.17(1)).

At the direction of resolutions enacted or adopted by the 1983 General Assembly, the Legislative Research Commission has undertaken studies of numerous subjects. These studies were grouped into broad categories and each member of the Commission was given responsibility for one category of studies. The Cochairmen of the Legislative Research Commission, under the authority of General Statutes 120-30.10(b) and (c), appointed committees consisting of members of the General Assembly and of the public to conduct the studies. Cochairmen, one from each

house of the General Assembly, were designated for each committee.

The Study of Peat Mining and Large-Scale Land Clearing was authorized by Chapter 905 of the 1983 Session Laws. That act made reference to House Joint Resolution 220 introduced by Representative Evans. Copies of Chapter 905 of the 1983 Session Laws and House Joint Resolution 220 may be found in Appendix A of this report.

The Legislative Research Commission placed this Study under the Agriculture Area for which Representative Chris Barker of the Commission is responsible. This Study was assigned to the Committee on Peat Mining and Large-Scale Land Clearing that was cochaired by Senator Joseph E. Thomas and Representative Robert McAlister. Membership lists of the Legislative Research Commission and of the Study Committee may be found in Appendix B.

COMMITTEE PROCEEDINGS

The Committee on Peat Mining and Large-Scale Land Clearing held three meetings and one public hearing during the course of its study. The meetings were held January 18, 1984, October 17, 1984, and November 12, 1984 in the State Legislative Building in Raleigh. The public hearing was held February 15, 1984 at Roper Elementary School in Roper, North Carolina. In the course of its deliberations, the Committee heard testimony from State departments and agencies concerned about the regulation of peat mining and large-scale land clearing, from scientists involved in research for the State and federal governments, from persons applying for or holding peat mining permits and scientists employed by them, and from environmentalists. The committee also heard from farmers, fishermen, public officials, and other concerned citizens living in the area directly affected by peat mining and large-scale land clearing. A list of the witnesses who appeared before the Committee may be found in Appendix C.

History of Land Clearing in Eastern North Carolina¹

Although the intense interest in peat mining and land clearing is new, there is a long history of clearing land and

¹This section is extracted from materials presented to the committee by Stephen G. Conrad, Director of the Division of Land Resources, Department of Natural Resources and Community Development.

draining swamps for agriculture and forestry in North Carolina. In fact, at various times in its history, North Carolina has both encouraged and financially supported land clearing and swamp drainage. This history has been obscured by the recent realization that clearing land and draining swamps may have an adverse effect on coastal water quality, fisheries, wildlife, air quality and ground water quality and quantity.

Efforts to drain and clear swamp land for agriculture date back to at least the early 1700's. Essentially, all of the swamp lands in the State have been logged at least once and have had some drainage imposed, either for agricultural development or incidental to logging and reforestation.

Prior to the American Revolution, George Washington and a group of business associates, tried to drain the Dismal Swamp. In 1763, a canal called the Washington Ditch was dug to Lake Drummond to facilitate logging. This canal is believed to be the oldest canal still in use in the United States.

In the early 1800's, the State began to perceive the swamp lands as a valuable resource and to actively encourage their development. Between 1819 and 1826, a State Board of Internal Improvements existed and promoted the drainage of swamp lands and the construction of railroads, plank roads and turnpikes. In 1825, the State Literary Fund was established. All swamp lands not previously granted were turned over to the fund to be sold to raise money for public education. From 1838 to 1842, the State dug drainage canals at Lake Mattamuskeet, Alligator Lake and Pungo Lake. An estimated 60,000 to 70,000 acres were drained at

Alligator Lake and Pungo Lake at a cost of \$170,000. In 1841, the best land was offered for sale. No bids were received. Over the next ten years, the Literary Board actively tried to sell the land with very little success. This first State effort to develop swamp lands for agriculture essentially ended in 1860.

In 1909, the General Assembly passed legislation that enabled groups of land owners to set up drainage districts and support area-wide projects through assessments against land. Shortly thereafter, a number of projects were underway, including drainage of 70,000 acres around Lake Mattamuskeet and 4,000 acres at Angola Bay. By 1911, fifty-three drainage districts had been or were being established, covering over 700,000 acres.

The Current Status of Land Clearing

Extensive data about land clearing is available for the area that lies between the Albemarle and Pamlico Sounds, or the Pamlimarle Peninsula. This area includes Washington, Tyrrell and Hyde Counties, the mainland of Dare County and a large part of Beaufort County and lies to the east of the Suffolk Scarp, which runs approximately along N.C. Highway 32 and contains 1,266,000 acres. Other areas in eastern North Carolina are also experiencing large land conversion projects but data are not available for them.²

²Presentation of Stephen G. Conrad

A recent analysis by McMullan Consulting³ of aerial photography in Pamlico Peninsula between 1940 and 1981 indicates that the highest rate of land clearing during this period occurred between 1963 and 1974. During those years, the average annual increase was 9,000 acres. From 1940 to 1981, the average annual increase was 5,500 acres per year. Thus, at least through 1981, on the Pamlico Peninsula, there has not been the rapidly accelerating rate of land clearing that some researchers have predicted or described.

According to the McMullan report, 1,266,000 acres, or 29.6% of the Pamlico Peninsula was cleared by 1981. These figures represent the net cleared land; some land previously cleared had reverted by 1981. The net land cleared was 12.4% in 1940, 18.5% in 1963 and 26.2% in 1974. A breakdown of these statistics by county prepared by McMullan Consulting may be found in Appendix D of this report.

The Current Status of Peat Mining

North Carolina has nearly 700,000 acres of peat.⁴ If it were economically and environmentally sound to mine all of this

³Philip S. McMullan, Jr., "Land-Clearing Trends of the Albemarle-Pamlico Peninsula", McMullan Consulting, Durham, December 1983.

⁴A map showing the location of North Carolina's peat deposits and a chart showing the distribution of North Carolina's peat may be found in Appendix E of this report. The map and the chart were presented to the committee by Roy L. Ingram. Dr. Ingram is a professor of Geology at the University of North Carolina in Chapel Hill and has served as a consultant for peat mining interests.

peat, it would provide us with as much energy as would 400 million tons of bituminous coal.

The first attempt to utilize North Carolina's peat resources to produce energy on a large scale was the First Colony Peat-to-Methanol Project sponsored by a partnership called Peat Methanol Associates, or PMA. PMA proposed to synthetically produce 60 million gallons of methanol fuel per year over 30 years from a 15,000 acre site in Washington County. After the peat was mined, the land would have been reclaimed for agriculture and for wildlife habitat.

PMA received enthusiastic support from citizens and government officials in Washington County who welcomed the influx of capital and the promise of new jobs it would create. PMA was viewed with alarm by fishermen, environmentalists, and others who felt that the project could result in serious and irreparable harm to marine fisheries, wildlife habitats, and water quality.

In response to PMA's application for all applicable State permits for its facility, the Peat Mining Task Force was created to assess North Carolina's regulatory process as it could be applied to such a large facility. The Task Force concluded that the State's regulatory framework was adequate for the job and PMA and the State began the costly and complex job of preparing, processing, and considering the permit applications.⁵ Before the permitting process was completed, PMA withdrew its applications

⁵For a schedule of all the permits PMA had applied for, see Appendix F.

for North Carolina permits because of insufficient financial commitments from the Synfuels Corporation. Thus although the permitting process seemed to be working smoothly, there is no way of knowing whether the permits would have been granted or the opposition to PMA would have prevailed. No peat mining operations comparable to PMA in size or complexity are currently contemplated in North Carolina.

As of October 15, 1984, six peat mining operations, other than PMA, are applying for or have already received peat mining permits. A description of these operations, where they stand with regard to the permitting process, and what they are doing or planning to do with regard to peat mining, may be found in Appendix G of this report. A map showing the location of these operations may also be found in Appendix G.

The Current Regulation of Peat Mining

Under the current law, peat mining operations require at least three major permits. Pursuant to the recommendation of the the 1983 Peat Mining Task Force, the mining permit (G.S. 74-46 et seq.) is the "umbrella permit" used to coordinate State regulation of peat mines.⁶ Other permits required for all peat mining operations are a NPDES-mining permit (National Pollution Discharge Elimination System permit--G.S. 143-215.1) for regulation of water quality, and an air quality-mining permit

⁶A copy of G.S. 74-51, which sets out the standards an application for a peat mining permit must meet may be found in Appendix H of this report.

(G.S. 143-215.105 et seq.). If the mine is in a Capacity Use area, site dewater, process water, and mine dewater permits (G.S. 143-215.11 et seq.) are required. Depending on the facility connected with the mine, an NPDES-facility permit (G.S. 143-215.1), an erosion control site permit (G.S. 113A-50 et seq.), county landfill approval (G.S. 130A-290 et seq. and any applicable county ordinances), and hazardous waste storage, treatment, and disposal permits (G.S. 130A-290 et seq.) may be required. The facility may also have to comply with hazardous waste generator regulations (G.S. 130A-290 et seq.). Peat mining operations under the jurisdiction of the Corps of Engineers also require a §404 dredge and fill permit, a §401 water quality certification, and, if the Corps determines the activity to be significant, an environmental impact statement.⁷

The State's experience with the PMA permitting process indicates that these permits were broad enough and thorough enough, at the present time, to regulate effectively even a large-scale peat mining facility. The PMA permitting process gave the State access to adequate information from the applicant, gave the public adequate opportunity to be heard, and gave the State adequate flexibility to tailor the permitting process and the permit conditions to the proposed operation. As the State acquires more experience with peat mining and as more studies of

⁷ See "Peat Mining and Natural Resources", Peat Mining Task Force Report, Office of Coastal Management, Raleigh, January 1983, pp. 14-21, for a discussion of some of these permit requirements.

the cumulative effects of peat mining and large-scale land clearing on the environment are performed, the State may be compelled to regulate more rigorously peat mining operations.

FINDINGS

Pursuant to the direction of Chapter 905 of the 1983 Session Laws, the Legislative Research Commission's Committee on Peat Mining and Large-Scale Land Clearing, after having reviewed the information presented, makes the following recommendations to the 1985 General Assembly:

RECOMMENDATION 1: THE MINING COMMISSION SHOULD REEVALUATE ITS BOND SCHEDULE FOR PEAT MINING TO ASSURE THAT THE REQUIRED BOND IS ADEQUATE TO COVER THE COSTS OF REASONABLE REHABILITATION FOR USEFUL PURPOSES OF AFFECTED LAND AND THE PROTECTION OF THE NATURAL RESOURCES OF THE SURROUNDING AREA. THE MINING COMMISSION IS REQUESTED TO CONSIDER THIS RECOMMENDATION AT THE EARLIEST OPPORTUNITY AND TO REPORT ITS FINDINGS TO THE PRESIDENT PRO TEMPORE OF THE SENATE, THE SPEAKER OF THE HOUSE OF REPRESENTATIVES, AND THE DIRECTOR OF THE RESEARCH DIVISION BY MAY 1, 1985.

G.S. 74-54 requires each applicant for a peat mining permit or renewal of a peat mining permit to maintain a bond in favor of the State of North Carolina.⁸ The purpose of this bond is to assure faithful performance of the requirements set forth in the Mining Act of 1971 and the rules and regulations adopted pursuant to it.

⁸ Statutory bond requirements for peat mines appear in the North Carolina General Statutes at G.S. 74-54. A copy of this section may be found in Appendix I of this report.

The Department of Natural Resources and Community Development uses a schedule adopted by the Mining Commission⁹ to determine the bond amount required for each peat mining permit. The amount of bond required in any given case depends on the area of land the permit holder is required to reclaim under the reclamation plan approved for that land by the Department. Reclamation "means the reasonable rehabilitation of the affected land for useful purposes, and the protection of the natural resources of the surrounding area."¹⁰ The maximum bond the Department may require for any peat mine, even if the operator does not have what the administrative rules refer to as "a good record", is \$50,000.

Evidence presented to the committee by State permit-letting officials, scientists doing research on water quality, and other persons involved with peat lands, pointed to the ecological complexity of peat lands and the likelihood that abuse of them could produce serious damage to the water and air resources in surrounding areas. It is clear that the cost of reclamation in each case could easily exceed \$50,000. Thus, the maximum bond, even in conjunction with the civil and criminal sanctions provided in the Mining Act, may not provide the Department with

⁹This schedule appears in the North Carolina Administrative Code at 15 NCAC 5B.0003. A copy of it may be found in Appendix J of this report.

¹⁰Statutory definitions of "reclamation" and "reclamation plan" appear in the North Carolina General Statutes at G.S. 74-49 (12) and (13). A copy of these definitions may be found in Appendix K of this report.

sufficient leverage to protect North Carolina's natural resources.

For these reasons, the study committee recommends that the Mining Commission re-evaluate its bonding requirements for peat mines. The committee requests that the Mining Commission report its findings to the President Pro Tempore of the Senate, the Speaker of the House of Representatives, and the Director of the Research Division by May 1, 1985 so that the General Assembly will have time to assess these findings.

RECOMMENDATION 2: THE DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT SHOULD COMMISSION ADDITIONAL STUDIES ON THE CUMULATIVE IMPACTS OF PEAT MINING AND LARGE-SCALE LAND CLEARING ON COASTAL WATER QUALITY, FISHERIES, WILDLIFE, AIR QUALITY AND GROUND WATER QUALITY AND QUANTITY.

At the present time, the long-term cumulative effects of peat mining and large-scale land clearing on coastal water quality, fisheries, wildlife, air quality and ground water quality and quantity are unknown. This point was made again and again by fishermen, environmentalists, and other concerned citizens at the public hearing held by the committee in Roper, as well as by representatives of the Department of Natural Resources and Community Development, the Wildlife Resources Commission, and the Department of Human Resources who appeared before the committee. Prior to the formation of this study committee, it was made with respect to peat mining in 1983 by the Peat Mining Task Force. A study of the cumulative impacts of

peat mining,¹¹ funded by the Coastal Energy Impact Program and commissioned by the Department of Natural Resources and Community Development on the recommendation of the Peat Mining Task Force, reinforced some of these concerns but did not "prove" them in a manner satisfactory to all scientists. Because the cumulative effects may be extremely significant and may be irreversible, and because it is the duty of the State to utilize and to conserve its natural resources for the benefit of all of its citizens, the committee recommends that the Department of Natural Resources and Community Development commission additional research on this complex question.

The study committee supports an appropriation for this additional research. The Department of Natural Resources and Community Development should determine what funding would be required for this research and should bring that information to the General Assembly when this issue is under consideration.

RECOMMENDATION 3: THE DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT SHOULD PERFORM AN INVENTORY OF LAND CLEARING ACTIVITIES IN THE COASTAL AREA.

At the present, there is no complete inventory of land clearing activities in the coastal area. We simply do not know how much land clearing activity has taken place or at what rate it has taken place. Without this information, we cannot assess the impact, to date, of land clearing activities on coastal water quality, fisheries, wildlife, air quality and ground water

¹¹Gale, Judith A. and Adams, David A. Cumulative Impacts of Peat Mining. CEIP Report #40. August 1984.

quality and quantity. We cannot begin to determine how much land clearing activity constitutes "large-scale land clearing activity" or whether more State regulation would be necessary or appropriate. An essential first step in answering these questions is to perform a complete inventory of land clearing activities in the coastal area.

The study committee supports an appropriation for the inventory. The Department of Natural Resources and Community Development should determine what funding would be required for this inventory and should bring that information to the General Assembly when the issue is under consideration.

APPENDIX A

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 1983
RATIFIED BILL

CHAPTER 905
HOUSE BILL 1142

AN ACT AUTHORIZING STUDIES BY THE LEGISLATIVE RESEARCH COMMISSION
AND BY THE COMMISSION ON CHILDREN WITH SPECIAL NEEDS AND MAKING
TECHNICAL AMENDMENTS RELATING THERETO.

The General Assembly of North Carolina enacts:

Section 1. The Legislative Research Commission may study the topics listed below. Listed with each topic is the 1983 bill or resolution that originally proposed the study and the name of the sponsor. The Commission may consider the original bill or resolution in determining the nature, scope and aspects of the study. The topics are:

-
- (5) Adequacy of State Management of Large-Scale Land Clearing and Peat Mining (H.J.R. 220 - Evans),
-

Sec. 6. For each of the topics the Legislative Research Commission decides to study, the Commission may report its findings, together with any recommended legislation, to the 1984 Session of the General Assembly or to the 1985 General Assembly, or the Commission may make an interim report to the 1984 Session and a final report to the 1985 General Assembly.

Sec. 14. This act is effective upon ratification.
In the General Assembly read three times and ratified,
this the 21st day of July, 1983.

JAMES C. GREEN

James C. Green
President of the Senate

LISTON B. RAMSEY

Liston B. Ramsey
Speaker of the House of Representatives

GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 1983



HOUSE JOINT RESOLUTION 220
Committee Substitute Favorable 6/16/83

Sponsors: Representative

Referred to: Appropriations.

February 16, 1983

A JOINT RESOLUTION AUTHORIZING THE LEGISLATIVE RESEARCH
COMMISSION TO STUDY THE ADEQUACY OF STATE MANAGEMENT OF LARGE-
SCALE LAND CLEARING AND PEAT MINING.

Be it resolved by the House of Representatives, the Senate
concurring:

Section 1. The Legislative Research Commission is
authorized to study the impacts of large-scale land clearing and
peat mining in the coastal area and the adequacy of State
management of these activities. The study shall include an
analysis of:

(1) The amount of large-scale land clearing and peat
mining that is currently underway, recently completed, and
planned for the future;

(2) The impacts of these activities on coastal water
quality, fisheries, wildlife, air quality, groundwater quality and
quantity, fire hazards, local government finances, and State tax
revenues;

(3) The scope and adequacy of existing State laws and
regulation managing such activities and any need for changes
therein;

GENERAL ASSEMBLY OF NORTH CAROLINA

SESSION 1983

1 (4) The long-term environmental, economic and social
impacts of these activities;

3 (5) Whether an environmental impact statement should be
4 required for large-scale land clearing and peat mining.

5 The Commission shall report its findings and recommendations,
6 including recommendations for needed legislation, to the 1984
7 Session of the General Assembly.

8 Sec. 2. This resolution shall become effective July 1,
9 1983.

APPENDIX B

LEGISLATIVE RESEARCH COMMISSION

House Speaker Liston B.
Ramsey, Cochairman

Senator President Pro Tempore
W. Craig Lawing, Cochairman

Representative Christopher S.
Barker, Jr.

Senator William N. Martin

Representative John T. Church

Senator Helen Rhyne Marvin

Representative Bruce Ethridge

Senator William W. Staton

Representative John J. Hunt

Senator Joseph E. Thomas

Representative Margaret Tennille

Senator Russell Walker

LEGISLATIVE RESEARCH COMMISSION
COMMITTEE ON
PEAT MINING AND LARGE-SCALE LAND CLEARING

Senator Joseph E. Thomas,
Cochairman

Representative Robert McAlister,
Cochairman

Senator J. J. Harrington

Representative Edward C. Bowen

Senator R. P. Thomas

Representative Daniel H. Devane

Senator Vernon E. White

Representative Bruce Etheridge

Mr. Hobart G. Truesdell

Representative Charles Evans

APPENDIX C

Speakers appearing before the Legislative Research Commission's
Committee on Peat Mining and Large-Scale Land Clearing:

January 18, 1984:

Jim Summers, Secretary, NRCD
Steve Conrad, Director, Division of Land Resources, NRCD
O. W. Strickland, Solid & Wastes Management, DHR
Dr. Jim Stewart, Water Resource Research Institute, NCSU
Dr. David Adams, School of Forestry, NCSU
Dr. Wayne Skaggs, Biological and Agricultural Engineering, NCSU
Dr. Wendel Gilliam, Soil Science, NCSU
Dr. Greg Smith, Environmental Epidemiologist, Health Services
Stuart Critcher, Wildlife Resources Commission
Ray Forrest, Department of Agriculture

February 15, 1984: Public Hearing, Roper, NC

Donn W. Leva, PMA
Sam Johnson, Attorney at Law, representing PMA
Ralph Plumbee, Washington County Economic Developer
J. D. Brickhouse, Tyrrell County Board of Commissioners
Mary P. Lilley, Martin County Economic Development Commission
Willie Beacham, Kiwanis Club, Plymouth, NC
Lionel West, Washington County Planner
Lillie James, Director, Senior Citizens Center of Washington County
Mayor William R. Flowers, Town of Plymouth
Sam Stines, President, Plymouth Savings & Loan Association
Paul Lilley, Extension Soil Science Specialist, Tidewater Research, NCSU
I. W. Amerson, Jr., President, Washington County Chamber of Commerce
Jerry Cox, Jr., Belhaven, NC
Frances C. Silver, Southern Albemarle Association
Jack DeSarno, Washington County Manager
Mayme Davenport, Chairman, Washington County Commissioners
Joe Landino, Tyrrell County Commissioner
Wendel Hutchins, Attorney, Washington County
Ann Braddy
Todd Miller, NC Coastal Federation
Rusty Gaul, Conservation Chairman, Cypress Group, Sierra Club
Mark Dodge, Swan Quarter, NC
Rev. Edward Spruill, President, Rotary Club of Plymouth
State Representative John Gillam
Horace Twiford, Commercial Fisherman
Wayne Leary, Consultant, Creswell, NC
H. O. Golden, Commercial Fisherman, Bath, NC
Guy M. Whitford, County Agricultural Agent, NC Agricultural Extension Service
Ernest L. Jones, representing black churches and black caucuses, Washington Co
Rev. James Burnette, Roper, NC
Christine Shield, Creswell Woman's Club
Charles Meekins, Stumpy Point, NC
Willie Phillips, Commercial Fisherman, Bath, NC
Feather Phillips, Bath, NC
Larry Bray, Kitty Hawk, NC, President Outer Banks Audubon Chapter
Wade Hubers, Hyde County
Tom Carron, Fisherman, Oriental, NC
Ned Delamar, NC Fisheries Association
Robert Alligood, Superintendent, Washington County Schools
Tim Spear, Creswell, NC

Speakers appearing before the Legislative Research Commission's
Committee on Peat Mining and Large-Scale Land Clearing:

February 15, 1984: (cont.)

Henri Johnson, Attorney, representing NC Fisheries Association
John Small, Attorney, representing Buckridge, Inc., Tyrrell County
Manly Fuller, National Wildlife Federation's Southeastern Natural Resources
Center, Raleigh, NC
Clark Callaway, NC Fisheries Association
Terry Pollock, NC Coastal Federation
Charles Hough, Chairman, Washington County Board of Education
Ruffin Gill, Jr., Plymouth, NC
Rev. Samuel Smith, Plymouth, NC
Dr. Ernie Larkin, Pamlico-Tar River Foundation, Inc.
Dolores D. Holeman, Plymouth Housing Authority
Jarahnee H. Bailey, Plymouth, NC
Dick Leach, Pamlico-Tar River Foundation
Michael Kelly, Outer Banks Chamber of Commerce
Maynard Harrell
Peter McNair, NAACP, Washington County
Zeb Taylor, Chairman, Washington County Black Caucus
Donald Bryan, Mayor of Nags Head
Reggie Caroon, NC Fisheries Association
Bob Marsh, Roper, NC
Clifford Phiffer, Principal, Washington County
George Ayers, Plymouth, NC
Faye Leary, Washington County Librarian and Real Estate Broker
Hilton Simmons
A. B. Whitley, NC Wildlife Federation

October 17, 1984:

B. J. Copeland, Director, UNC Sea Grant College Program
Jim Summers, Secretary, NRCD
Steve Conrad, Director, Division of Land Resources, NRCD
Dr. David Adams, School of Forestry, NCSU
Dr. James Gregory, School of Forestry, NCSU
Dr. Wayne Skaggs, Biological and Agricultural Engineering, NCSU
Dr. Roy Ingram, Professor of Geology, UNC, Chapel Hill
Haul M. Reddick, Peat Fuels, Inc.
Simon B. Rich, Jr., Peatco, Inc.
S. J. Esposito, Whitetail Farms

November 12, 1984:

Reggie Caroon, North Carolina Fisheries Association
Jim Summers, Secretary, NRCD
Steve Conrad, Director of Land Resources, NRCD

APPENDIX D

TABLE 3.1 ALBEMARLE-PAMLICO PENINSULA
CLEARED LAND ADDED AND REVERTED

	TOTAL ACRES	DARE	TYRRELL	HYDE	WASH- INGTON	BEAUFORT
CLEARED BY 1940's	156,800	1,300	21,700	44,200	39,200	50,400
% Land Area	12.4%	0.7%	8.7%	11.3%	17.9%	24.0%
Added 40's-63	84,900	0	1,200	27,400	27,500	28,800
Reverted by 63	-7,900	-1,300	-1,700	-2,400	-1,600	-1,000
Net Clear	77,000	-1,300	-500	25,000	25,900	27,800
CLEARED BY 1963	233,800	0	21,300	69,200	65,100	78,200
% Land Area	18.5%	0.0%	8.5%	17.7%	29.7%	37.2%
Added 63-74	99,500	0	13,100	36,100	41,200	9,100
Reverted by 74	-1,800	0	0	-300	-800	-700
Net Clear	97,800	0	13,100	35,800	40,400	8,500
CLEARED BY 1974	331,600	0	34,400	105,000	105,500	86,700
% Land Area	26.2%	0.0%	13.8%	26.8%	48.2%	41.3%
Added 74-81	66,500	3,200	31,200	17,200	10,200	4,700
Reverted by 81	-23,000	0	-200	-13,500	-8,000	-1,300
Net Clear	43,500	3,200	31,000	3,700	2,200	3,400
CLEARED BY 1981	375,100	3,200	65,400	108,700	107,700	90,100
% Land Area	29.6%	1.6%	26.2%	27.7%	49.2%	42.9%
Peninsula Acres	1,266,000	195,000	250,000	392,000	219,000	210,000

Source: Aerial Photograph Measurement 1940-81 measured by McMullan Consulting.

APPENDIX E

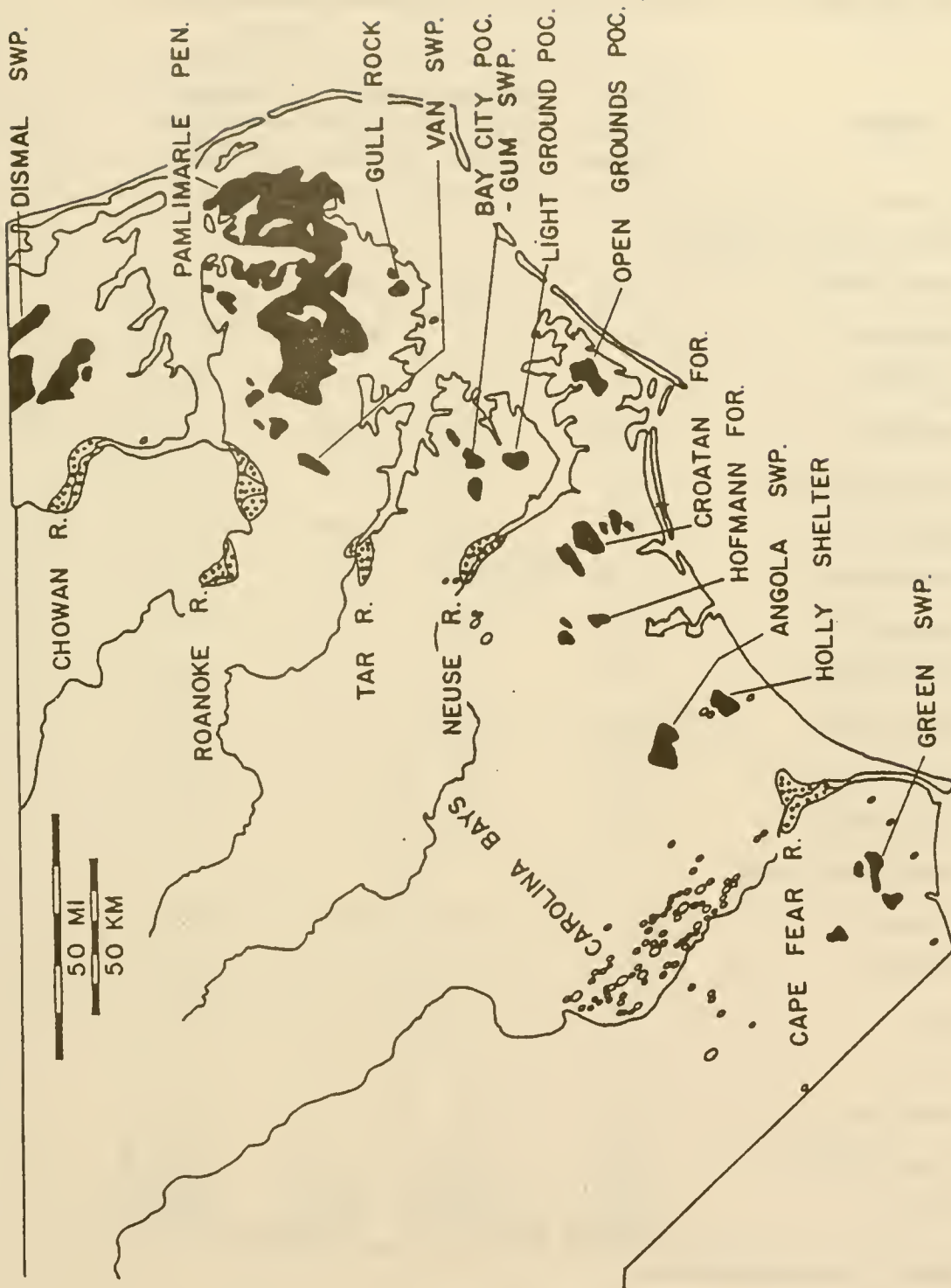


Fig. -- Map showing location of North Carolina peat deposits. Coastal swamp deposits -- solid black. Carolina Bay deposits -- open ellipses; Possible river flood plain deposits - dot pattern.

TABLE - North Carolina Peat Resources

DEPOSIT	> 0 ft		>4 ft	
	Area	Weight*	Area	Weight*
	10 ³ Acres	10 ⁶ Tons	10 ³ Acres	10 ⁶ Tons
I. Coastal Swamps (Pocosins)				
Dismal Swamp	76.8	67.8	34.7	43.4 - G**
Pamlimarle	373.	278.	175.	196. - G
Gull Rock	8.1	4.6	1.3	1.6 - G
Van Swamp	6.6	5.8	2.6	3.8 - G
Bay City-Gum Swamp	12.3	5.9	1.1	1.1 - G
Light Grounds	5.9	5.2	2.8	3.5 - G
Open Grounds	11.0	6.3	0.5	0.6 - G
Croatan Forest	35.3	26.9	11.6	14.4 - G
Hofmann Forest	5.2	4.2	1.0	1.6 - G
Angola Swamp	21.9	15.2	8.8	9.6 - G
Holly Shelter	9.2	6.7	3.1	3.8 - G
Green Swamp	16.4	10.3	3.6	4.3 - G
II. River Flood Plains				
Chowan	25.	25.	13.	12. - P
Roanoke	32.	30.	16.	15. - P
Tar	6.	6.	3.	3. - P
Neuse	6.	6.	3.	3. - P
Cape Fear	12.	10.	6.	5. - P
III. Carolina Bays	35.3	15.4	8.1	8.4 - F
TOTAL	698.10 ³ (1090 sq mi)	530.10 ⁶	295.10 ³ (460 sq mi)	330.10 ⁶

* Weight in moisture-free tons

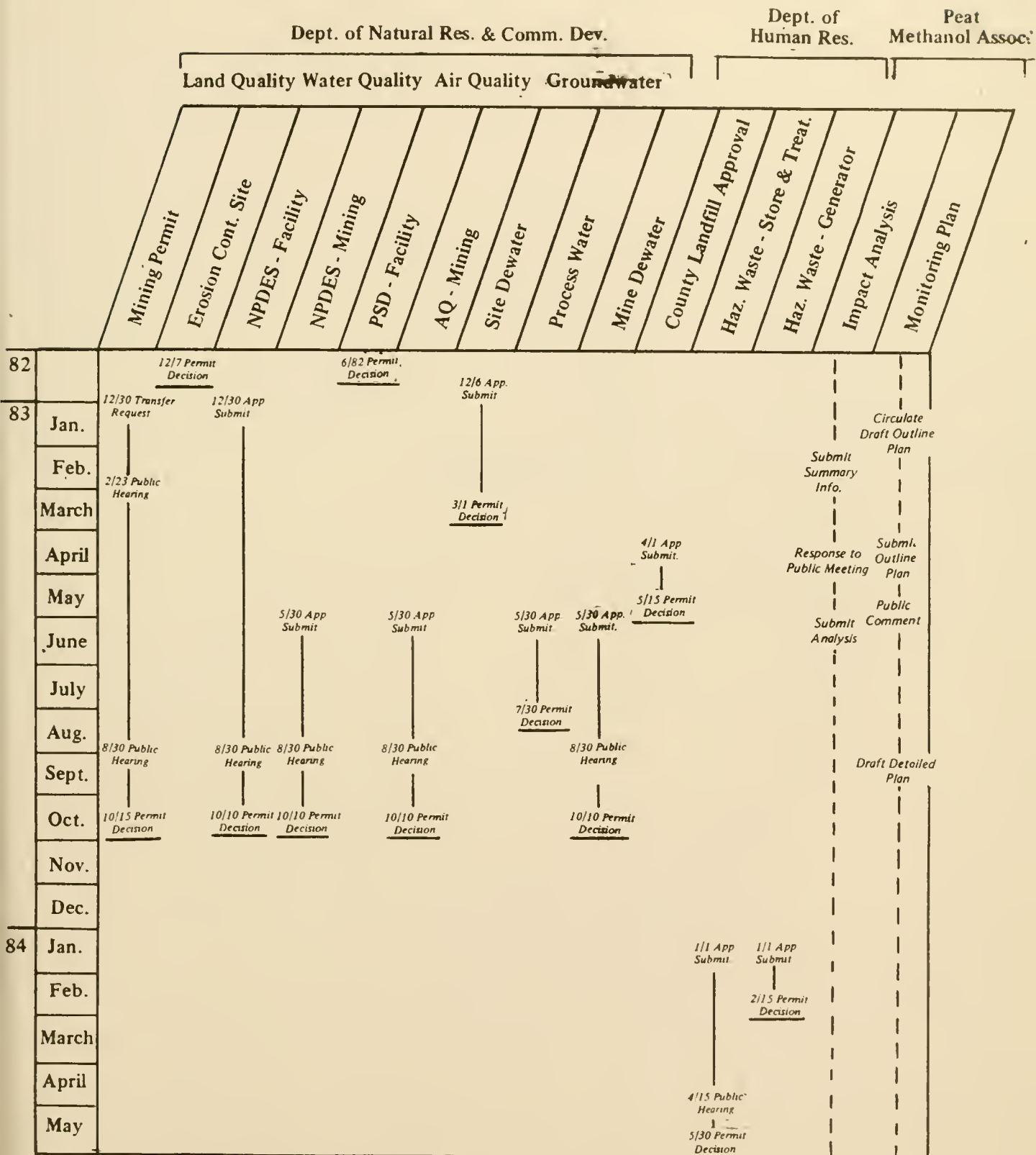
** Quality of Estimate: G-Good, F-Fair, P-Poor

Bituminous
Coal Equivalent = 400 million tons

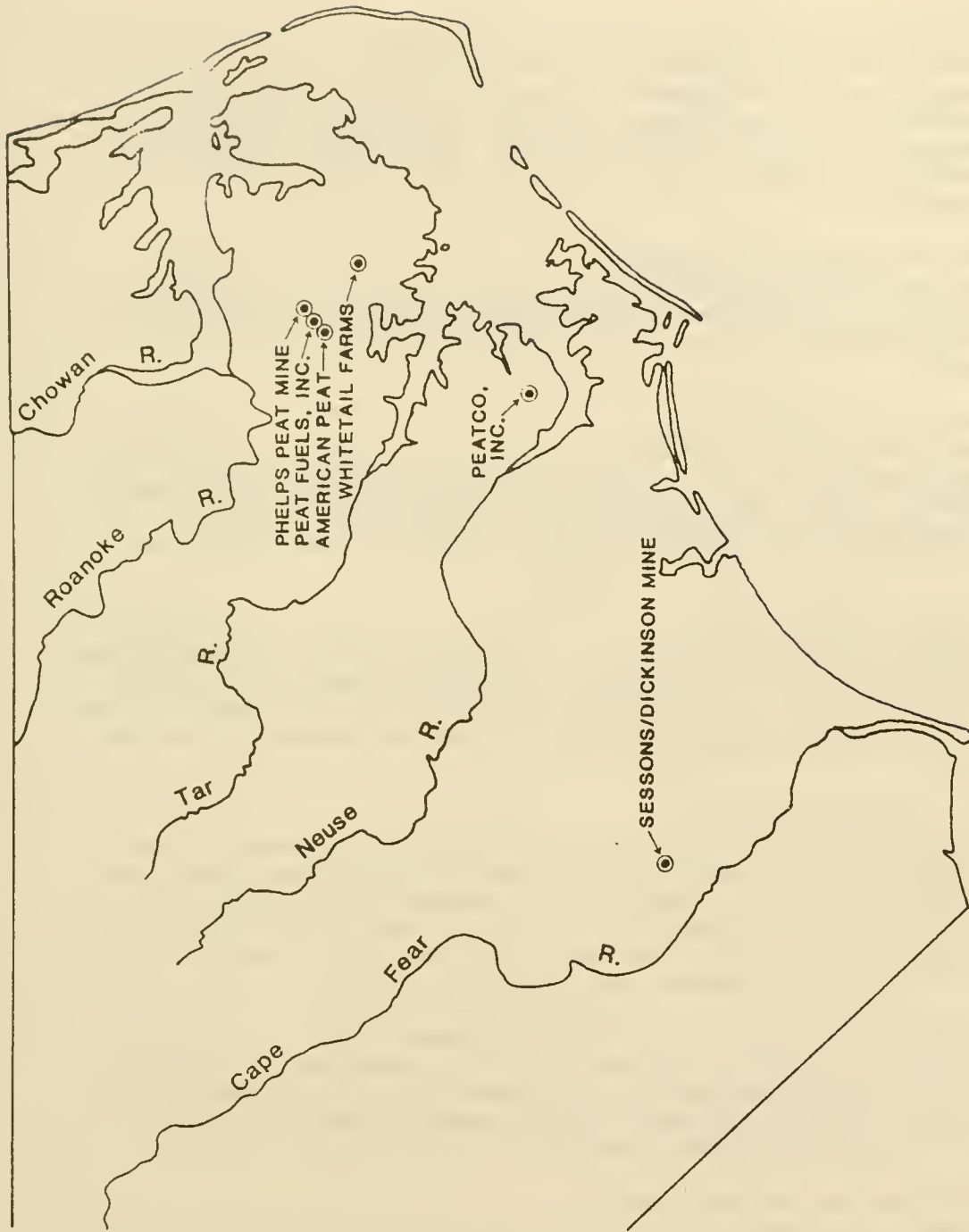
250 million tons

APPENDIX F

DRAFT PERMIT REVIEW SCHEDULE – PEAT METHANOL ASSOCIATES



APPENDIX G



Map Showing Location Of Proposed Peat Mines In North Carolina.

STATUS OF PEAT MINING
October 15, 1984

- First Colony Farms, Washington, Tyrrell, Hyde County (15,000 ac.)
First Colony has requested that PMA application review for mining permit transfer groundwater drainage for mining be resumed and transferred to First Colony. Mining Air Quality Permit has been transferred to First Colony from PMA. Experimental mining being conducted on approximately 200 acres. Future mining plans are indefinite.
- American Peat Company, Hyde County (98 ac.)
Horticultural peat operation adjacent to First Colony Farms has mining and air permits. NPDES permit is pending. Has not applied for groundwater permit. Mining operations continuing at small scale.
- Peat Fuels, Inc., Hyde County (708 ac.)
Fuel peat operation adjacent to First Colony Farms has disturbed approximately 130 acres. Operator has mining permit. NPDES permit issued in 1984. Air Quality permit issued on May 17, 1984. Groundwater permit application was returned for more information. No current mining being conducted.
- Peatco, Inc., Pamlico County (3600 ac.)
Proposed fuel peat operation in Light Ground Pocosin. Operator has obtained mining, air, groundwater and NPDES permits. Permission to experimentally mine approximately 200 acres--one foot deep has been granted subject to monitoring. No mining disturbance to date but plans to start in November, 1985.
- Whitetail Farms, Hyde County (7142 ac.)
Proposed peat fuel operation located near Lake Mattamuskeet and adjacent to the Inland Waterway. Has obtained mining, NPDES, and groundwater permits. Operator has requested air quality applications but has not submitted. No activity conducted at site but plans to start in 1985. Has applied for permits for barge facilities to barge peat to proposed power plant in New Bern.
- Nash Johnson II, Bladen County (Sessions/Dickinson Mine) (1593 ac.)
First Application to mine peat in Carolina Bays was received April 24, 1984. Applicant met with Department on April 24, 1984 to discuss permit requirements. NPDES permit issued. Air Quality permit issued. Awaiting submittal of wildlife mitigation plan.
- Stroud Engineering, Beaufort County
Proposal to extract methane gas from peat bog groundwater. Attorney General's office has determined that mining permit is not needed but oil and gas and groundwater regulations will cover the environmental concerns.

APPENDIX H

No permit shall be issued except in accordance with the procedures set forth in G.S. 74-51, nor modified or renewed except in accordance with the procedures set forth in G.S. 74-52.

An appeal from the Department's denial of a permit may be taken to the Mining Commission, as provided by G.S. 74-61.

Prior to the issuance of a new mining permit, the operator shall make a reasonable effort, satisfactory to the Department, to notify all owners of record of land adjoining the proposed site, and to notify the chief administrative officer of the county or municipality in which the site is located that he intends to conduct a mining operation on the site in question.

No permit shall become effective until the operator has deposited with the Department an acceptable performance bond or other security pursuant to G.S. 74-54. If at any time said bond or other security, or any part thereof, shall lapse for any reason other than a release by the Department, and said lapsed bond or security is not replaced by the operator within 30 days after notice of the lapse, the permit to which it pertains shall automatically become void and of no further effect.

An operating permit shall be granted for a period not exceeding 10 years. If the mining operation terminates and the reclamation required under the approved reclamation plan is completed prior to the end of said period, the permit shall terminate. Termination of a permit shall not have the effect of relieving the operator of any obligations which he has incurred under his approved reclamation plan or otherwise. Where the mining operation itself has terminated, no permit shall be required in order to carry out reclamation measures under the reclamation plan.

An operating permit may be renewed from time to time, pursuant to procedures set forth in G.S. 74-52.

An operating permit may be suspended or revoked for cause, pursuant to procedures set forth in G.S. 74-58. (1971, c. 545, s. 5; 1973, c. 1262, s. 33; 1981, c. 187, s. 1.)

Effect of Amendments. — The 1981 amendment added the fourth paragraph.

§ 74-51. Permits — application, granting, conditions.

Any operator desiring to engage in mining shall make written application to the Department for a permit. Such application shall be upon a form furnished by the Department and shall fully state the information called for; in addition, the applicant may be required to furnish such other information as may be deemed necessary by the Department in order adequately to enforce this Article.

The application shall be accompanied by a reclamation plan which meets the requirements of G.S. 74-53. No permit shall be issued until such plan has been approved by the Department.

The application shall be accompanied by a signed agreement, in a form specified by the Department, that in the event a bond forfeiture is ordered pursuant to G.S. 74-59, the Department and its representatives and its contractors shall have the right to make whatever entries on the land and to take whatever actions may be necessary in order to carry out reclamation which the operator has failed to complete.

Before deciding whether to grant a new permit, the Department shall circulate copies of a notice of application for review and comment as it deems advisable. The Department shall grant or deny the permit requested as expeditiously as possible, but in no event later than 60 days after the application form and any relevant and material supplemental information reasonably

required shall have been filed with the Department, or if a public hearing is held, within 30 days following the hearing and the filing of any relevant and material supplemental information reasonably required by the Department. Priority consideration shall be given to applicants who submit evidence that the mining proposed will be for the purpose of supplying materials to the Board of Transportation.

Upon its determination that significant public interest exists, the Department shall conduct a public hearing on any application for a new mining permit. Such hearing shall be held before the Department reaches a final decision on the application, and in making its determination, the Department shall give full consideration to all comments submitted at the public hearing. Such public hearing shall be held within 60 days of the filing of the application.

The Department may deny such permit upon finding:

- (1) That any requirement of this Article or any rule or regulation promulgated hereunder will be violated by the proposed operation;
- (2) That the operation will have unduly adverse effects on wildlife or fresh water, estuarine, or marine fisheries;
- (3) That the operation will violate standards of air quality, surface water quality, or groundwater quality which have been promulgated by the Department of Natural Resources and Community Development;
- (4) That the operation will constitute a substantial physical hazard to a neighboring dwelling house, school, church, hospital, commercial or industrial building, public road or other public property;
- (5) That the operation will have a significantly adverse effect on the purposes of a publicly owned park, forest or recreation area;
- (6) That previous experience with similar operations indicates a substantial possibility that the operation will result in substantial deposits of sediment in stream beds or lakes, landslides, or acid water pollution; or
- (7) That the operator has not corrected all violations which he may have committed under any prior permit and which resulted in,
 - a. Revocation of his permit,
 - b. Forfeiture of part or all of his bond or other security,
 - c. Conviction of a misdemeanor under G.S. 74-64, or
 - d. Any other court order issued under G.S. 74-64.

In the absence of any such findings, a permit shall be granted.

Any permit issued shall be expressly conditioned upon compliance with all requirements of the approved reclamation plan for the operation and with such further reasonable and appropriate requirements and safeguards as may be deemed necessary by the Department to assure that the operation will comply fully with the requirements and objectives of this Article. Such conditions may, among others, include a requirement of visual screening, vegetative or otherwise, so as to screen the view of the operation from public highways, public parks, or residential areas, where the Department finds such screening to be feasible and desirable. Violation of any such conditions shall be treated as a violation of this Article and shall constitute a basis for suspension or revocation of the permit.

Any operator wishing any modification of the terms and conditions of his permit or of the approved reclamation plan shall submit a request for modification in accordance with the provisions of G.S. 74-52.

If the Department denies an application for a permit, it shall notify the operator in writing, stating the reasons for its denial and any modifications in the application which would make it acceptable. The operator may thereupon modify his application or file an appeal, as provided in G.S. 74-61, but no such appeal shall be taken more than 60 days after notice of disapproval has been mailed to him at the address shown on his application.

Upon approval of an application, the Department shall set the amount of the performance bond or other security which is to be required pursuant to G.S. 74-54. The operator shall have 60 days following the mailing of such notification in which to deposit the required bond or security with the Department. The operating permit shall not be issued until receipt of this deposit.

When one operator succeeds to the interest of another in any uncompleted mining operation, by virtue of a sale, lease, assignment, or otherwise, the Department may release the first operator from the duties imposed upon him by this Article with reference to such operation and transfer the permit to the successor operator; provided, that both operators have complied with the requirements of this Article and that the successor operator assumes the duties of the first operator with reference to reclamation of the land and posts a suitable bond or other security. (1971, c. 545, s. 6; 1973, c. 507, s. 5; 1977, c. 771, s. 4; c. 845, s. 2; 1981, c. 787, ss. 2, 3.)

Effect of Amendments. — The 1981 amendment added the first sentence in the fourth paragraph, inserted "relevant and material" following "form and any" and "reasonably" preceding "required shall have" in the second

sentence of the fourth paragraph, added the language beginning "or if a public hearing" at the end of that sentence, and added the fifth paragraph.

~~§ 74-54. Bonds.~~

~~Each applicant for an operating permit, or for the renewal thereof, shall file with the Department following approval of his application and shall thereafter maintain in force a bond in favor of the State of North Carolina, executed by a surety approved by the Commissioner of Insurance, in the amount set forth below. The bond herein provided for must be continuous in nature and shall remain in force until cancelled by the surety. Cancellation by the surety shall be effectuated only upon 60 days written notice thereof to the Department and to the operator.~~

~~The applicant shall have the option of filing a separate bond for each operating permit or of filing a blanket bond covering all mining operations within the State for which he holds a permit. The amount of each bond shall be based upon the area of affected land to be reclaimed under the approved reclamation plan or plans to which it pertains, less any such area where reclamation has been completed and released from coverage by the Department, pursuant to G.S. 74-56, or based on such other criteria established by the Mining Commission. The Department shall set the amount of the required bond in all cases, based upon a schedule established by the Mining Commission.~~

~~The bond shall be conditioned upon the faithful performance of the requirements set forth in this Article and of the rules and regulations adopted pursuant thereto. Liability under the bond shall be maintained as long as reclamation is not completed in compliance with the approved reclamation plan unless released only upon written notification from the Department. Notification shall be given upon completion of compliance or acceptance by the Department of a substitute bond. In no event shall the liability of the surety exceed the amount of the surety bond required by this section.~~

~~In lieu of the surety bond required by this section, the operator may file with the Department a cash deposit, negotiable securities, a mortgage of real property acceptable to the Department, or an assignment of a savings account in a North Carolina bank on an assignment form prescribed by the Department.~~

~~If the license to do business in North Carolina of any surety upon a bond filed pursuant to this Article should be suspended or revoked, the operator shall, within 60 days after receiving notice thereof, substitute for such surety a good~~

APPENDIX I

Upon approval of an application, the Department shall set the amount of the performance bond or other security which is to be required pursuant to G.S. 74-54. The operator shall have 60 days following the mailing of such notification in which to deposit the required bond or security with the Department. The operating permit shall not be issued until receipt of this deposit.

When one operator succeeds to the interest of another in any uncompleted mining operation, by virtue of a sale, lease, assignment, or otherwise, the Department may release the first operator from the duties imposed upon him by this Article with reference to such operation and transfer the permit to the successor operator; provided, that both operators have complied with the requirements of this Article and that the successor operator assumes the duties of the first operator with reference to reclamation of the land and posts a suitable bond or other security. (1971, c. 545, s. 6; 1973, c. 507, s. 5; 1977, c. 771, s. 4; c. 845, s. 2; 1981, c. 787, ss. 2, 3.)

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§ 74-54. Bonds.

Each applicant for an operating permit, or for the renewal thereof, shall file with the Department following approval of his application and shall thereafter maintain in force a bond in favor of the State of North Carolina, executed by a surety approved by the Commissioner of Insurance, in the amount set forth below. The bond herein provided for must be continuous in nature and shall remain in force until cancelled by the surety. Cancellation by the surety shall be effectuated only upon 60 days written notice thereof to the Department and to the operator.

The applicant shall have the option of filing a separate bond for each operating permit or of filing a blanket bond covering all mining operations within the State for which he holds a permit. The amount of each bond shall be based upon the area of affected land to be reclaimed under the approved reclamation plan or plans to which it pertains, less any such area where reclamation has been completed and released from coverage by the Department, pursuant to G.S. 74-56, or based on such other criteria established by the Mining Commission. The Department shall set the amount of the required bond in all cases, based upon a schedule established by the Mining Commission.

The bond shall be conditioned upon the faithful performance of the requirements set forth in this Article and of the rules and regulations adopted pursuant thereto. Liability under the bond shall be maintained as long as reclamation is not completed in compliance with the approved reclamation plan unless released only upon written notification from the Department. Notification shall be given upon completion of compliance or acceptance by the Department of a substitute bond. In no event shall the liability of the surety exceed the amount of the surety bond required by this section.

In lieu of the surety bond required by this section, the operator may file with the Department a cash deposit, negotiable securities, a mortgage of real property acceptable to the Department, or an assignment of a savings account in a North Carolina bank on an assignment form prescribed by the Department.

If the license to do business in North Carolina of any surety upon a bond filed pursuant to this Article should be suspended or revoked, the operator shall, within 60 days after receiving notice thereof, substitute for such surety a good

and sufficient corporate surety authorized to do business in this State. Upon failure of the operator to make such substitution, his permit shall automatically become void and of no effect. (1971, c. 545, s. 9; 1981, c. 787, s. 4.)

Effect of Amendments. — The 1981 amendment substituted "a permit" for "permits" at the end of the first sentence of the second paragraph, substituted "where" for "whose" in the second sentence of the second paragraph, added the language beginning "or based on" at the end

of that sentence, and made minor changes in punctuation in that sentence. The amendment substituted the third sentence of the second paragraph for a former third sentence that set out the specific amount of the bonds required based upon the area of land to be reclaimed.

§ 74-64. Penalties for violations.

(a) Civil Penalties.

- (1) a. A civil penalty of not more than five thousand dollars (\$5,000) may be assessed by the Department against any person who fails to secure a valid operating permit prior to engaging in mining, as required by G.S. 74-50. No civil penalty shall be assessed until the operator has been given notice of the violation pursuant to G.S. 74-60. Each day of a continuing violation shall constitute a separate violation and a civil penalty of not more than five thousand dollars (\$5,000) per day may be assessed for each day the violation continues.
- b. Any permitted operator who violates any of the provisions of this Article, any rules or regulations promulgated thereunder, or any of the terms and conditions of his mining permit shall be subject to a civil penalty of not more than one hundred dollars (\$100.00). Each day of a continuing violation shall constitute a separate violation. Prior to the assessment of any such civil penalty, written notice of the violation shall be given. The notice shall describe the violation with reasonable particularity, shall specify a time period reasonably calculated to permit the violator to complete actions to correct the violation, and shall state that failure to correct the violation within that period may result in the assessment of a civil penalty.
- (2) The Department shall determine the amount of the civil penalty to be assessed pursuant to G.S. 74-64(a)(1) and shall give notice to the operator of the assessment of the civil penalty pursuant to G.S. 74-60. Said notice shall set forth in detail the violation or violations for which the civil penalty has been assessed. The operator may appeal the assessment of any civil penalty assessed pursuant to this section in accordance with the procedures set forth in G.S. 74-61.
- (3) If payment of any civil penalty assessed pursuant to this section is not received by the Department or equitable settlement reached within 30 days following notice to the operator of the assessment of the civil penalty or within 30 days following the denial of any appeal by the operator pursuant to G.S. 74-61 and 74-62, the Department shall refer the matter to the Attorney General for the institution of a civil action in the name of the State in the superior court of the county in which the violation is alleged to have occurred to recover the amount of the penalty.
- (4) All funds collected pursuant to this section shall be placed in the special fund created pursuant to G.S. 74-59 and shall be used to carry out the purposes of this Article.
- (5) In addition to other remedies, the Department may request the Attorney General to institute any appropriate action or proceedings to

APPENDIX J

NR&CD - MINING: MINERAL RESOURCES

T15: 05E .0000

SUBCHAPTER 5B - MINING PERMITTING REGULATIONS

3.25

~~.0001 PURPOSE~~~~3.27~~

~~This Subchapter implements G.S. 74-50, which requires that all
mine operators obtain a valid mining permit from the Department
of Natural Resources and Community Development before beginning
mining operations in the state and G.S. 74-63 and G.S. 143B-
290(1)(d) which give the North Carolina Mining Commission the
authority to promulgate rules and regulations as may be
reasonably necessary to administer the Mining Act of 1971, G.S.
74-46 to 74-68.~~

~~History Note: Statutory Authority G.S. 74-50;
74-63; 143B-290(1)(d);
Eff. February 1, 1976;
Amended Eff. January 31, 1979.~~

~~3.38~~~~3.39~~~~3.40~~~~3.41~~~~.0002 ACTIVITIES REQUIRING PERMITS~~~~3.43~~

~~No operator, as defined in G.S. 74-41, shall engage in mining,
as defined in G.S. 74-49, without having first obtained from the
department an operating permit which covers the affected land and
which has not terminated, been revoked, been suspended for the
period in question, or otherwise become invalid. Provided no
permit shall be required for those activities specifically
exempted by G.S. 74-67.~~

~~3.45~~~~3.46~~~~3.47~~~~3.48~~~~3.49~~~~3.50~~~~3.51~~

~~History Note: Statutory Authority G.S. 74-50; 74-67;
Eff. February 1, 1976.~~

~~3.54~~~~3.55~~~~.0003 PROCEDURES FOR OBTAINING PERMITS: BONDING REQUIREMENTS~~~~3.57~~

~~Any operator desiring to engage in mining may request an
application form from the department and shall submit the
completed application to the department. Upon receipt of the
completed application, the department shall approve, approve with
modifications or disapprove the application as expeditiously as
possible but no later than 60 days after receipt of the completed
application.~~

~~4.2~~~~4.3~~~~4.4~~~~4.5~~~~4.6~~~~4.7~~

~~Upon approval of the application, the department will set the
amount of the performance bond and issue a bond form to be used
in securing the bond. The amount of the bond will be based upon
the type of mine and the area of affected land and set according
to the following schedule:~~

~~4.9~~~~4.10~~~~4.11~~~~4.12~~

TYPE MINE

AFFECTED AREA/BOND AMOUNT

4.15

I. Quarry

1-10 acres: \$5,000; 10-25 acres: \$12,500;

4.17

NR&CD - MINING: MINERAL RESOURCES

T15: 05B .0000

(Excavation in rock)	25+ acres: \$25,000 with good operating record - otherwise \$50,000.	4.18 4.19
II. Clay	1-5 acres: \$5,000; 5-10 acres: \$12,500; 10-25 acres: \$25,000; 25+ acres: \$25,000 with good operating record - otherwise \$50,000.	4.22 4.23 4.24
III. Sand and Gravel	1-5 acres: \$2,500; 5-10 acres: \$5,000; 10-25 acres: \$12,500; 25+ acres: \$25,000 with good operating record - otherwise \$50,000.	4.27 4.28 4.29
IV. Peat	1-5 acres: \$2,500; 5-10 acres: \$5,000; 10-25 acres: \$12,500; 25-1,000 acres: \$25,000; 1,000+ acres: \$50,000. Each permit area must be bonded individually.	4.32 4.33 4.34 4.35
V. Phosphate	1-10 acres: \$12,500; 10-25 acres: \$25,000; 25+ acres: \$25,000 with good operating record - otherwise \$50,000.	4.38 4.39 4.40
VI. Others	To be set on individual basis.	4.43

For the purposes of these Regulations, a good operating record is defined as two consecutive years without being assessed a civil penalty or subject to other enforcement action pursuant to G.S. 74-64 or having a permit suspended or revoked under G.S. 74-58 or bond or other surety forfeited under G.S. 74-59.

In lieu of the surety bond, the operator shall file with the department a cash deposit, negotiable securities, a mortgage of real property acceptable to the department, or an assignment of a savings account in a North Carolina bank on an assignment form prescribed by the department. The operator shall have 60 days following the mailing of notification of amount of security in which to deposit with the department the required security or bond.

Upon timely receipt of the bond or acceptable security in the required amount, the mining permit will be issued.

History Note: Statutory Authority G.S. 74-51; 74-54;
Eff. February 1, 1976;
Amended Eff. December 1, 1983.

~~.0000 INFORMATION REQUIRED IN PERMIT APPLICATION~~
~~(a) The completed application for the mining permit shall~~
~~include information concerning the mining operation and a~~
~~reclamation plan for the restoration of all affected land.~~

APPENDIX K

- (11) ~~"Peak" means overburden removed from its natural position and deposited elsewhere in the shape of conical piles or projecting points.~~
- (12) "Reclamation" means the reasonable rehabilitation of the affected land for useful purposes, and the protection of the natural resources of the surrounding area. Although both the need for and the practicability of reclamation will control the type and degree of reclamation in any specific instance, the basic objective will be to establish on a continuing basis the vegetative cover, soil stability, water conditions and safety conditions appropriate to the area.
- (13) "Reclamation plan" means the operator's written proposal as required and approved by the Department for reclamation of the affected land, which shall include but not be limited to:
- Proposed practices to protect adjacent surface resources;
 - Specifications for surface gradient restoration to a surface suitable for the proposed subsequent use of the land after reclamation is completed, and proposed method of accomplishment;
 - Manner and type of revegetation or other surface treatment of the affected areas;
 - Method of prevention or elimination of conditions that will be hazardous to animal or fish life in or adjacent to the area;
 - Method of compliance with State air and water pollution laws;
 - Method of rehabilitation of settling ponds;
 - Method of control of contaminants and disposal of mining refuse;
 - Method of restoration or establishment of stream channels and stream banks to a condition minimizing erosion, siltation, and other pollution;
 - Such maps and other supporting documents as may be reasonably required by the Department; and
 - A time schedule that meets the requirements of G.S. 74-53.
- ~~(14) "Refuse" means all waste soil, rock, mineral, scrap, tailings, slimes, and other material directly connected with the mining, cleaning, and preparation of substances mined and shall include all waste materials deposited on or in the permit area from other sources.~~
- (15) "Ridge" means overburden removed from its natural position and deposited elsewhere in the shape of a long, narrow elevation.
- (16) "Spoil bank" means a deposit of excavated overburden or refuse.
- (17) "Termination of mining" means cessation of mining operations with intent not to resume, or cessation of mining operations as a result of expiration or revocation of the permit of the operator. Whenever the Department shall have reason to believe that a mining operation has terminated, it shall give the operator written notice of its intention to declare the operation terminated, and he shall have an opportunity to appear within 30 days and present evidence that the operation is continuing; where the Department finds that such evidence is satisfactory, it shall not make such a declaration. (1971, c. 545, s. 4; 1973, c. 1262, ss. 33, 86; 1977, c. 771, s. 4; c. 845, s. 1.)

CASE NOTES

Stated in Builders Supplies Co. v. Gainey,
282 N.C. 261, 192 S.E.2d 449 (1972).

Cited in Sanders v. Wilkerson, 20 N.C. App.
331, 201 S.E.2d 571 (1974).

